

ELECTRICIAN**DEFINITION:**

Under general supervision, maintains, troubleshoots, repairs, inspects, tests and installs all types of electrical systems systems which include traffic signal computers and preemption systems, coaxial communication circuits, instrumentation systems, fire alarm circuits, street lighting circuits, pumps and building electrical systems at the journey level; technical knowledge of the functionnalysis and operation of the City's SCADA system for water, sewer and storm facilities; performs related work as required.

CLASS CHARACTERISTICS:

This is the journey level class in the installation, maintenance and repair of the City's electrical systems and equipment. The work covers the entire trade and incumbents often work independently due to the diverse nature of the work and the distances between facilities involved.

IMPORTANT AND ESSENTIAL JOB FUNCTIONS:

1. Install and maintain electrical, emergency and generating equipment.
2. Install conduit, transformers, wires, cables, pull boxes, switchboards, switches and equipment required in making additions, extensions or alterations in electrical systems.
3. Service, prepare, and maintain lighting, power, heating, street lighting, pumps, fire alarm, communications and traffic control systems.
4. Make new installations; add to existing installations; and repairs electrical systems in City buildings.
5. Repair and replace defective parts in motors, generators, pumps, regulators, switchboards, controllers, switches and other fixtures and appliances.
6. Test, locate, diagnose and repair trouble in electronic components, electrical systems and electrical equipment.
7. Complete work order forms, activity logs, requisitions, supply orders and other related forms.
8. Respond to electrical service customer calls and complaints and recommend remedy.
9. Maintain inventory of material associated with assigned work.

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10. Operate underground locating devices.
11. Maintain records concerning all functions of assigned work.

MARGINAL/PERIPHERAL JOB FUNCTIONS:

1. Performs related work as required.

QUALIFICATIONS:

Knowledge of:

1. Electrical theory, practices, procedures, equipment, tools and materials.
2. The maintenance and repair of street lighting and traffic control systems.
3. Operation and maintenance of electrical motors, transformers, generators, controls and other electrical equipment.
4. Electrical safety procedures and appropriate precautions.
5. Operation and repair of float level and power failure alarm devices and telemetry systems.
6. National Electric Code, California Electrical Safety Orders and applicable laws and codes.
7. Remote Communications and Federal Communication Commission laws and requirements.
8. Technical knowledge of the functions and operations of SCADA Systems.

Skill in:

1. Using various types of test and measuring devices and hand and power tools skillfully.
2. Maintaining, troubleshooting, repairing, inspecting, testing, and installing a variety of electrical components and equipment.
3. Examining and diagnosing faulty electrical wiring operations.

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4. Interpreting and working from electrical diagrams, blueprints and specifications.
5. Estimating labor and materials requirements needed to complete assigned work.

Ability to:

1. Quickly learn and apply the policies and procedures pertaining to the work.
2. Establish and maintain effective working relationships with those contacted in the course of the work.
3. Maintain accurate records of work performed.

JOB REQUIREMENTS:

1. Journey-level status as an electrician, preferably supplemented by studies in electrical shop work in a trade or vocational school or any equivalent combination of experience and training which provide the required knowledge, skills and abilities.
2. Possession of a valid California Class C driver's license in compliance with adopted City driving standards.
3. Any combination of training and experience equivalent to the completion of high school.
4. Work out-of-doors in varying weather conditions and the physical capability for sustained walking, standing or climbing.
5. Respond to emergencies on a 24-hour stand-by basis.
6. Respond from home to the Public Works Corporation Yard within 30 minutes.
7. Work in a confined space.
8. Acquire a State Department of Health Services Grade I Water Distribution Operator Certificate within probationary period.
9. Climb 30 – 50 feet on a ladder.

MACHINES/TOOLS/EQUIPMENT UTILIZED:

1. Automobile
2. Calculator
3. Reports, forms, pencils and pens
4. Electrical diagrams, blueprints, maps, and specifications
5. Computer monitor, keyboard and printer
6. Copy machines
7. Fax machines
8. Telephone
9. Keys to City locks
10. Pager
11. Two-way radio
12. Gasoline pumps
13. Hard hat and cover-all
14. Miscellaneous hand tools
15. Power tools
16. Ladders

PHYSICAL DEMANDS:

1. Walking
2. Speaking/hearing
3. Seeing
4. Standing/sitting
5. Pushing/pulling
6. Climbing heights from 30 to 50 feet
7. Lifting and carrying an average of 10 lbs.
8. Mobility
9. Bending/stooping
10. Driving
11. Manual dexterity
12. Work in a confined space environment

PHYSICAL REQUIREMENTS:

1. Ability to discriminate among colors required for cable color reading.
2. Ability to work in confined spaces and at heights of thirty to fifty feet.
3. Good physical condition and strength to perform manual work.

ENVIRONMENTAL AND ATMOSPHERIC CONDITIONS:

Office Conditions:

1. Indoors: normal office conditions, 50% of the time
Travel: varying conditions, 50% of the time
2. Noise level: conducive to office setting
3. Lighting: conducive to office setting
4. Flooring: low level carpeting
5. Ventilation: provided by central air conditioning
6. Dust: normal, indoor levels

Field Conditions:

1. Outdoors: varying weather conditions
2. Noise level: varying low to high equipment noise
3. Flooring: asphalt, gravel, grass, dirt, rock, stairs, etc.
4. Dust: normal outdoor, to high outdoor levels
5. Hazards: exposure to rough electrical wiring and mechanical hazards, and all areas of construction in progress
6. Spaces: confined and/or those restricting movement